

REMARKS

The Applicants appreciate the thoroughness with which the subject application has been examined. By this amendment, changes have been made in the specification and certain claims, as set forth above, to overcome the Examiner's rejections and more concisely claim and describe the present invention. Claims 20 - 26 remain in the application for reconsideration by the Examiner. The Examiner's allowance of all pending claims is earnestly solicited.

Within the first claim set, claims 20 and 21 have been rejected under Section 102(b) as anticipated by Holloway (4,657,628) and claim 22 has been rejected under Section 103(a) as unpatentable over Holloway in view of Lin (5,502,009).

To further distinguish the invention over the art of record, the Applicants have revised independent claim 20, adding two paragraphs, "forming a first channel region over and in contact with said first device region, wherein said first channel region has an opposite conductivity type than the first device region;" and "forming a second channel region over and in contact with said second device region, wherein said second channel region has an opposite conductivity type than the second device region." Additionally, the last paragraph now includes, "wherein said first predetermined thickness is different than the second predetermined thickness." Support for these amendments can be found in the specification on page 12 beginning at line 6.

As can be seen from Holloway's Figure 1, Holloway discloses planar MOSFETS within the semiconductor layer, with the source and drain regions laterally disposed relative to the channel region. There is no disclosure of a channel region over and in contact with a device region, selected from the group consisting of a source region and a drain region, with a gate region adjacent the channel region. Thus Holloway does not disclose "forming a first channel region over and in contact with said first device region, wherein said first channel region has an opposite conductivity type than the first device region" and "forming a second channel region over and in contact with said second device region, wherein said second channel region has an opposite conductivity type than the second device region."

Nor would the combination of Holloway and Lin, assuming the combination is permitted according to the applicable rules, disclose the Applicant's invention, as Lin also

discloses a planar MOSFET, i.e., the source and drain regions are laterally disposed relative to the channel region within the semiconductor layer. Neither discloses “forming a first channel region over and in contact with said first device region, wherein said first channel region has an opposite conductivity type than the first device region” and “forming a second channel region over and in contact with said second device region, wherein said second channel region has an opposite conductivity type than the second device region.”

Claims 21 and 22 each further distinguish the invention as each defines a novel combination of additional features. It is therefore respectfully submitted that dependent claims 21 and 22 are allowable over the cited art.

No specific grounds of rejection have been set forth for dependent claim 23 depending from claim 20. Claim 23 is considered allowable over the art of record.

Within the second claim set, claim 24 has been rejected under Section 102(b) as anticipated by Holloway and claim 25 has been rejected under Section 103(a) as unpatentable over Holloway in view of Lin. Claim 26 has been rejected under Section 112.

To further distinguish the invention over the art of record, the Applicants have revised independent claim 24 to refer to first and second channel regions over and in contact with the first and the second diffusion regions, with the first and the second gate oxides are formed adjacent the first and the second channel regions, respectively. Also, the Applicants have added, “wherein the first predetermined thickness is different from the second predetermined thickness” and “the resulting structure providing two transistors with a substantially vertical current flow through the first and the second channel regions.” Support for the last-mentioned amendment can be found in the specification at lines 10-14 on page 8.

As can be seen from Holloway’s Figure 1, Holloway discloses planar MOSFETs having substantially horizontal current flow within the semiconductor layer. There is no disclosure of a channel region over and in contact with a device region with a gate region adjacent the channel region with substantially vertical current flow. Thus Holloway does not disclose or suggest, “forming a first channel region over and in contact with said first diffusion region, wherein said first channel region has an opposite conductivity type than said first diffusion region; forming a second channel region over and in contact with said second diffusion region wherein said second channel region has an opposite conductivity

type than said second diffusion region; forming a first gate oxide of a first predetermined thickness adjacent said first channel region; forming a second gate oxide of a second predetermined thickness adjacent said second channel region, wherein the first predetermined thickness is different from the second predetermined thickness," and "the resulting structure providing two transistors with a substantially vertical current flow through the first and the second channel regions."

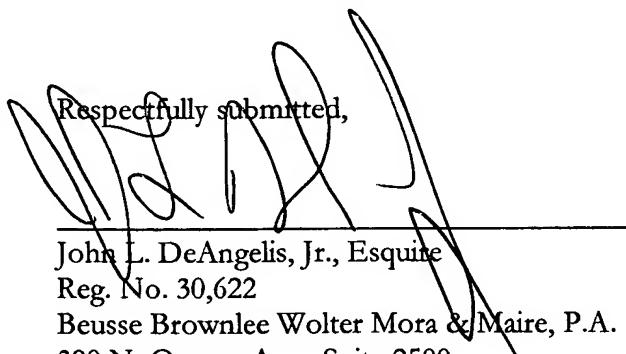
Nor would the combination of Holloway and Lin disclose the Applicant's invention, as Lin also discloses a planar MOSFET, i.e., the source and drain regions are laterally disposed relative to the channel region within the semiconductor layer. The combination does not disclose the steps set forth in amended claim 24.

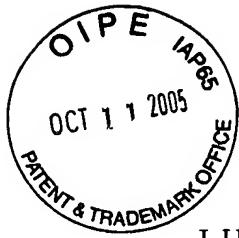
Dependent claim 25 has been amended for consistency with the amendments to claim 24 from which it depends and further distinguishes the invention as it defines a novel combination of additional features. It is therefore respectfully submitted that dependent claim 25 is allowable over the cited art.

Claim 26 has been amended to overcome the Section 112 rejection and should now be in condition for allowance.

The Applicants have attempted to comply with all of the points raised in the Office Action and it has been shown that all of the pending, i.e., claims 20-26, are now in condition for allowance. In view of the foregoing amendments and discussion, it is requested that all of the rejections be withdrawn and that the application be passed to issuance.

If a telephone conference will assist in clarifying or expediting this Preliminary Amendment, the Examiner is invited to contact the undersigned directly at the telephone number below.

Respectfully submitted,

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CERTIFICATE OF MAILING

I HEREBY CERTIFY that the foregoing Amendment is being deposited with the U.S. Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 8th day of October, 2005.

A handwritten signature in black ink, appearing to read "John L. DeAngelis". The signature is written in a cursive style with a horizontal line underneath it.